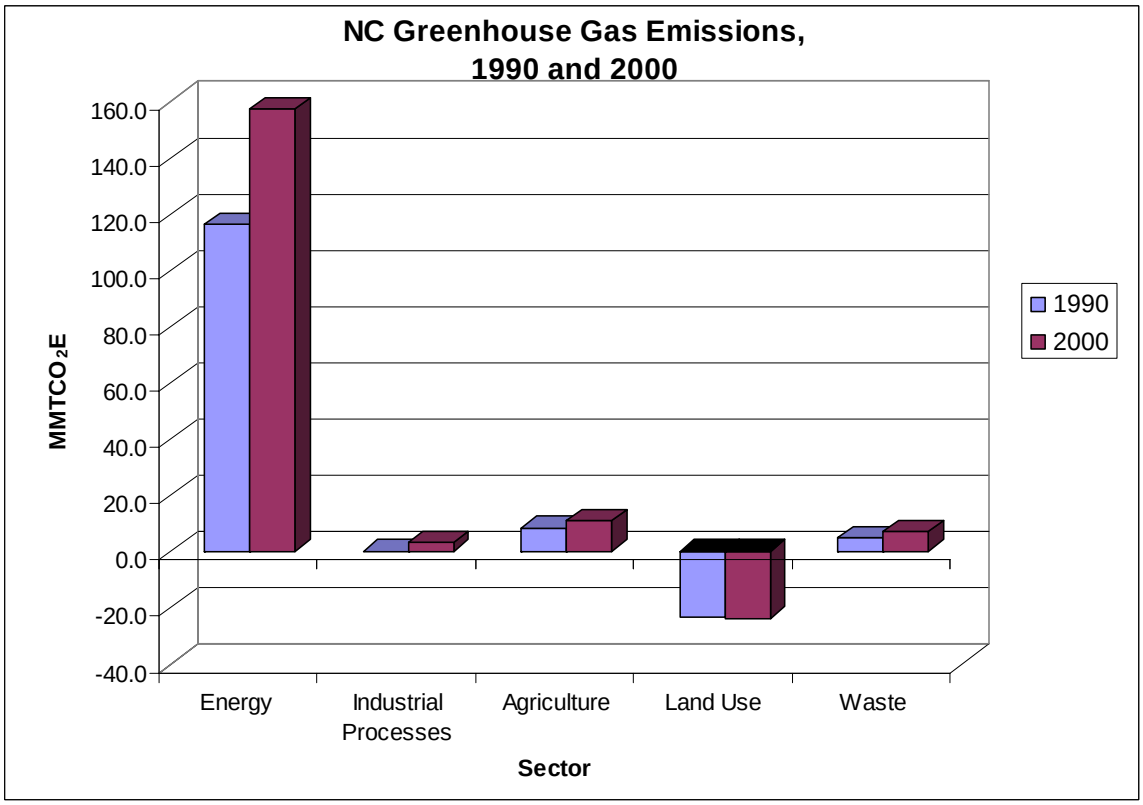
NORTH CAROLINA GREENHOUSE GAS EMISSIONS AND SINKS INVENTORY: SUMMARY



The North Carolina Department of Environment and Natural Resources *report, Revised Draft North Carolina Greenhouse Gas Inventory and Reference Case Projections 1990-2020,* contains an inventory of North Carolina's greenhouse gas (GHG) emissions from 1990 to 2000.[1]

In 1990, North Carolina emitted GHGs in the amount of 106.3 million metric tons carbon dioxide equivalent ($MMTCO_2E$). In 2000, GHG emissions from North Carolina increased by 46 percent to 154.6 $MMTCO_2E$.

Emissions from the agriculture and waste sectors contributed to the overall GHG growth increasing by 32 and 44 percent, respectively, between 1990 and 2000. The largest contributor was the energy sector, which contributed to 88 percent of gross GHG emissions in North Carolina and grew by 35 percent between 1990 and 2000.

[1] Historical GHG emissions estimates (1990 through 2000) were developed using a set of generally accepted principles and guidelines for state GHG emissions inventories relying to the extent possible on North Carolina-specific data and inputs. Many of the inventory estimates came from the U.S. Environmental Protection Agency's (EPA's) State Inventory Tool.

1990	CO_2 ($MMTCO_2E$)	CH_4 ($MMTCO_2E$)	N_2O ($MMTCO_2E$)	HFCs, PFCs, and SF_6 ($MMTCO_2E$)	Total ($MMTCO_2E$)
Energy	*	*	*	*	116.3
Industrial Processes	*	*	*	*	†
Agriculture	*	*	*	*	8.3
Land Use	*	*	*	*	-23.2
Waste	*	*	*	*	4.8
Net Emissions	*****	*****	*****	*****	**106.3**

1990	CO_2 ($MMTCO_2E$)	CH_4 ($MMTCO_2E$)	N_2O ($MMTCO_2E$)	HFCs, PFCs, and SF_6 ($MMTCO_2E$)	Total ($MMTCO_2E$)
Energy	*	*	*	*	157.3
Industrial Processes	*	*	*	*	3.1
Agriculture	*	*	*	*	11.0
Land Use	*	*	*	*	-23.7
Waste	*	*	*	*	7.0
Net Emissions	*****	*****	*****	*****	**154.6**

Note: Totals differ from those quoted in text due to independent rounding. All emissions are reported in million metric tons of carbon dioxide equivalent ($MMTCO_2E$).
* The North Carolina state Inventory did not include emissions by gas; thus, emissions of all gases, expressed in CO_2 equivalents are presented in the right-most column.
† No emissions were reported for this source in 1990.

Within the energy sector, emissions from electricity production grew by 50 percent largely due to an increase in electricity generated from coal power plants. Transportation-related emissions grew by 33 percent between 1990 and 2000 as a result of an increase in miles traveled and freight movement within North Carolina. These two sources accounted for 69 percent of the gross GHG emissions from North Carolina in 2000.

Emissions from industrial processes increased significantly from 1990 to 2000, due to the increased use of ozone-depleting substitutes (ODS). The land use sector accounted for a sink of 23.7 $MMTCO_2E$ in 2000, which increased slightly by 2 percent between 1990 and 2000. In 2000, this sink was offsetting 15 percent of North Carolina's gross GHG emissions.

Gross per capita emissions from North Carolina were 23 $MTCO_2E$ for the 1990-2000 timeframe, which is slightly less than the gross per capita national average of 25 $MTCO_2E$ for the same time period.